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PESTALOZZIAN INDUSTRIAL EDUCATION FOR JUVENILE REFORM¹

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Recent agitation and experiments in connection with industrial education in public schools have developed a general interest in all aspects of industrial training. The present tendency to reject formal manual training as inadequate, and to substitute direct training in industrial processes, involves a reversion to the type of industrial education which Pestalozzi advocated. This Pestalozzian scheme finds its best embodiment in some of our juvenile reform schools, and in this form can be traced directly to Pestalozzi in its origin. It is the purpose of this paper to describe its development.

General appreciation of necessity of industrial training for juvenile delinquents.—The necessity and the value of providing industrial occupation and training for orphans and for neglected and delinquent children have been generally recognized. The provisions made for such training have assumed different forms corresponding to variations in fundamental principles at different times. The Pestalozzian basis was prominent during the nineteenth century. To indicate the general character of the social problem, however, earlier provisions in England and the American Colonies will be cited before discussing the Pestalozzian development.

American colonial laws required training in industry.—The early American colonists appreciated the importance of industrial training for children and in some cases provided for it by law. The necessity for this requirement and its nature was expressed in the Massachusetts law of 1642 as follows:

¹In the last two volumes of the *Elementary School Teacher*, a number of articles appeared which were intended to illustrate a method of teaching the history of education by emphasizing school practice in its relation to social condition. This is the sixth article in this series. A textbook entitled *A History of Modern Elementary Education*, constructed on these principles, by the same author will appear in the near future.

[The General Court of Massachusetts] taking into consideration the great neglect in many parents and masters in training up their children in learning and labor and other employments which may be profitable to the Commonwealth, do hereupon order and decree that in every town the chosen men appointed for managing the prudential affairs of the same . . . shall have power . . . to put forth [as] apprentices the children of such as shall not be able and fit to employ and bring them up . . . and they are to take care that such as are set to keep cattle be set to some other employment withal, as spinning up on the rock, knitting, weaving tape, etc. . . . They are also to provide that a sufficient quantity of materials, as hemp, flax, etc., may be raised in their several towns, and tools and implements provided for working out the same.

In Virginia colony: "in 1646 an elaborate plan for industrial education was advanced by the Assembly . . . [which] marks out the settled policy of the State in the matter of industrial training."¹ This law refers back to English precedents in these words:

WHEREAS sundry laws and statutes by Act of Parliament established, have with great wisdom ordained, for the better education of youth in honest and profitable trades and manufactures . . . that the justices of peace should, at their discretion, bind out children to tradesmen or husbandmen to be brought up in some good and lawful calling . . . be it therefore enacted by the authority of this Grand Assembly, according to the aforesaid laudable custom in the Kingdom of England. . . .

The act provided that the commissioners of the several counties were to send two poor children from each county to James City to be "employed in the public flax houses under such master and mistresses as shall there be appointed in carding, knitting and spinning." Special dormitories were to be built and each county was to send food and other provisions for the children. In 1668 and other years, acts were passed empowering county courts to make similar provisions for educating and employing poor children.

Antecedent provisions in English laws.—That the colonial laws requiring industrial training were reproductions of antecedent English laws of the same nature was definitely stated in the preamble of the Virginia law of 1646 which we quoted. It is maintained by some authorities that such legislation as this constituted the fundamental basis of all English legislation for elementary education down to the nineteenth century; in other words, that

¹ Clewes, *Educational Legislation of Colonial Governments*, p. 355.

there is a very definite connection between legislation for poor relief and apprenticeship and legislation relative to elementary education.

The English social situation of the sixteenth and seventeenth centuries which necessitated such legislation was similar in character to the Swiss situation which confronted Pestalozzi later; namely, a very large number of unemployed, vagrant, shiftless, untrained children and adults. Many factors combined to cause the English situation, among them being the suppression of the monasteries by Henry VIII which abolished some of the dominant institutions for poor relief; and second, the abolishing of guilds by the Chantry acts which destroyed another of the important forms of poor relief. Other economic factors were causes also, notably the consolidation of small farms for grazing purposes, and the consequent eviction of hundreds of small farmers who were thus deprived of their means of livelihood. As a consequence we find important legislation in the reign of Queen Elizabeth, which included the same elements to which we have called attention in the colonial laws.

Domestic industries the basis of Pestalozzian industrial education.—

The Pestalozzian industrial education was originally planned to meet industrial conditions which existed in places where factory systems had not developed; in other words it was based on the conditions of domestic industries and handicrafts which prevailed generally down to the beginning of the nineteenth century. The factory system with the attendant industrial and social revolution, necessitated a change in the type of industrial work but not in the general scheme which Pestalozzi advocated.

Factories did not destroy possibilities of Pestalozzi's scheme.—

Factories were early introduced into Switzerland in certain select districts, and Pestalozzi himself commented on the new and peculiar social problems which they created. But many parts of Switzerland continued in the stage of home or domestic industries and handicrafts, even as they do to the present day. The same was true of the United States during the early nineteenth century. The more primitive forms of industry continued to be practiced in some places at the same time that the factory development was dominant in others.

Included in the domestic industries and the handicrafts were farming, work with textiles, namely, spinning, weaving, and dyeing of cotton and wool, and work with wood, metal, and leather. Examples of leather work were the shoe-making and nail- and tack-making which many New England farmers engaged in at home during the winter months. The early Pestalozzian industrial education emphasized especially farming and work with textiles. In the later development, under Fellenberg, other trades were taught. The enormous development of textile factories soon eliminated this form of labor from such schemes of education, but there remain, even at the present day, many forms of manual labor which are suited to the general purposes of the Pestalozzian industrial education.

Moreover, many intellectual and social leaders who have been impressed with the social evils that have attended factory development have idealized the former conditions of industry and have endeavored to reproduce them on a limited scale. This endeavor is represented in the arts-and-crafts movement of the present day. Many who consider this reaction against the factory system to be utopian believe, however, in the educative value of industrial training along the lines of domestic activities, agriculture, and handicrafts.

Pestalozzi's writings described the degraded condition of Swiss peasantry.—Two phases of Pestalozzi's own work directly related to industrial education were the publication of *Leonard and Gertrude* (1781) and his experiments at Neuhof and Stanz. Every student should spend a few hours reading *Leonard and Gertrude* to get an appreciation of the low moral standards which prevailed in the Swiss villages.

The typical village which Pestalozzi described was governed by semi-feudal customs, being under the control of a nobleman who lived in a castle outside of the town. Owing to the dishonest administration and oppression by his subordinates, the most degraded conditions had developed. The elements of viciousness in this life, as described by Pestalozzi, included all forms of public and private dishonesty, graft and oppression, intrigue and perjury, cheating and lying, gambling, drunkenness, hypocrisy in religious

matters, superstition—including belief in witchcraft and ghosts—domestic disorder, idleness, laziness, general shiftlessness, and filthiness.

In contrast with all these, Pestalozzi presented examples of possible social reforms which would result in a fair, honest, and efficient management of the public affairs, in real piety and charity, domestic peace, cleanliness and order, appreciation of responsibility, industry, economy and general thrift, and more intelligent methods of labor.

Condition of neglected and vagrant children.—Other striking examples of the prevailing social conditions are contained in Pestalozzi's descriptions of the individual children in this establishment at Neuhof and Stanz. These examples and others show that many of the children had not even profited by the meager instruction offered in the village schools. When we recall that this instruction consisted in a bare memorizing of the catechism, and the acquirement of a stumbling facility in reading, we see how hopelessly inadequate it was to cope with the social conditions that Pestalozzi described.

School to reproduce conditions of ideal home.—Pestalozzi's plan for social reform through training in domestic industries was described in *Leonard and Gertrude*. The central idea was that the school should reproduce the typical conditions of a well-ordered peasant's or artisan's home. This idea is expressed in the following quotations:

The school ought really to stand in the closest connection with the life of the home, instead of, as now, in strong contradiction to it. . . . The school ought to be brought into harmony with the developing influence of domestic life. . . . All verbal instruction, in so far as it aims at true human wisdom and at the highest goal of this wisdom, true religion, ought to be subordinated to a constant training in practical domestic labor.

Domestic labor in Gertrude's home.—The home of Gertrude, which Pestalozzi described, was his ideal. In addition to receiving careful religious and moral training, the children spent a large part of the time spinning under the direction of their mother. The following quotation presents the picture seen when Gertrude, the mason's wife, brings home some children of an unfortunate neighbor, Rudy.

The mason's children were all at their spinning wheels and although they greeted their guests joyfully, they did not stop working for a moment. "Hurry and get through and then you can play with your little friends till six o'clock," said Gertrude. Rudy's children stood in open-mouthed wonder at the beautiful work and the cheerful aspect of the room. "Can you spin?" she asked. "No," they answered. "Then you must learn, my dears. My children wouldn't sell their knowledge of it at any price, and are happy enough on Saturday, when they get their few kreutzers. The year is long, my dears, and if we earn something every week, at the end of the year there is a lot of money, without our knowing how we came by it."

Supplemented by intellectual and religious instruction.—This domestic labor constituted the central activity of the home, but it was supplemented by intellectual training much of which was carried on while the children were doing the manual work. The following quotation describes how this was done:

The children all helped wash the dishes, and then seated themselves at their customary places before their work. . . . First the children sang their morning hymns, and then Gertrude read a chapter of the Bible aloud, which they repeated after her, while they were spinning, rehearsing the most instructive passages until they knew them by heart.

The instruction she [Gertrude] gave them in the rudiments of arithmetic was intimately connected with the realities of life. . . . She made them count their threads while spinning, and the number of turns on the reel when they wound the yarn into skeins.

Instruction in spinning in the ideal village school.—Pestalozzi believed it possible to organize the village school in imitation of Gertrude's home as indicated in the following quotation:

The lieutenant began his school, and Gertrude helped him in the arrangement of it. They examined the children with regard to their previous studies. . . . Besides reading, all were to learn writing and arithmetic, which previously had only been taught to the more wealthy in private lessons. . . . A good, capable woman who came to take charge of the sewing, spinning, etc., proved a most valuable and conscientious helper in the work. Whenever a child's hand or wheel stopped she would step up and restore things to their former condition. If the children's hair was in disorder she would braid it while they studied and worked . . . and she showed them how to fasten their shoes and stockings properly, besides many other things they did not understand.

Educative labor to be taught in reformatories.—Finally, Pestalozzi indicated his belief that such training should be provided, not only

in the ordinary schools, but also in orphan asylums and houses of correction where the inmates should be given definite education in manual trades.

Pestalozzi taught farming and textile work at Neuhof.—The plan which Pestalozzi described in *Leonard and Gertrude* (1781) he had tried to put into practice on his farm at Neuhof from 1774 to 1780. When he proposed this experiment, although he had just failed as a farmer, several philanthropists provided the necessary funds.

Most of the children that Pestalozzi took in were vagrants and beggars. Many of them were vicious and improved little in the short time spent under his care. Others, however, were honest and capable and needed only the opportunity which he offered to develop into efficient persons. At one time he had thirty-seven children, at another fifty, and later eighty. Describing the management of the institution he said:

I get very valuable help from Miss M. of Strassberg, who is both highly gifted and of untiring activity. I have, besides, a master to teach weaving, and two skilled weavers; a mistress to teach spinning, and two good spinners; a man who winds for the weavers and teaches reading at the same time; and two men and two women who are almost always employed on the land.

Pestalozzi had no administrative ability and the management of such an enterprise, calling for unusual skill, was beyond his powers. Consequently the experiment was abandoned. In spite of its failure, it had served a valuable purpose in demonstrating the lines along which industrial education might develop. It remained for Emmanuel Fellenberg to organize a successful institution on these same lines.

Emmanuel Fellenberg's Pestalozzian Institutions. Early acquaintance with Pestalozzi.—Pestalozzi carried on an intimate correspondence with Emmanuel Fellenberg in 1792 concerning the French Revolution; and in 1804, for a few months, Pestalozzi tried to conduct his school under the business management of Fellenberg at Münchenbuchsee.

Fellenberg active in Swiss social reform.—Fellenberg's father, a high governmental official in Switzerland, was interested in Pestalozzi's experiments, and thus Emmanuel, while quite young, became acquainted with the latter. His mother early directed his atten-

tion to the care of the poor and unfortunate. He pursued political and social studies in German universities; visited Paris in 1795 to ascertain the French intentions with regard to Switzerland; tried in vain to arouse his country to appreciate its danger; led Swiss troops against the French when they invaded Switzerland in 1798, but was defeated and had to flee the country. Later he was permitted to return. He occupied important administrative offices for a while, but he soon became disgusted with the general dishonesty and lack of interest in public affairs, and turned his attention to education. He became convinced that legislation in favor of improvements in education was too slow a process and decided to use his ample fortune in establishing "a model institution in which it should be proved what education could accomplish for humanity." For this purpose he purchased a large country estate at Hofwyl, near Berne. Here he conducted, from 1806 to 1844, educational experiments along Pestalozzian lines which were as successful from an administrative and economic standpoint as Pestalozzi's were unsuccessful.¹

Included industrial training of rich as well as poor.—Fellenberg's aim was to establish an institution in which the poor would be trained to work, and the rich trained to appreciate the work of the poor and to be efficient in directing it for the public good. He believed that agriculture, as the principal occupation of the people, was best adapted to produce the harmonious physical and intellectual development at which he aimed. His aim was broader than Pestalozzi's had been at Neuhof, inasmuch as it included not only the industrial education of the poor, but also the training of teachers for rural schools and the training of the rich.

Many successful phases of the Hofwyl institution.—The Hofwyl institution was organized gradually, each element in the organization being well established before another was added. By 1829, according to William Woodbridge's contemporary description, the institution included the following elements: (1) a farm of about 600 acres; (2) workshops for manufacturing agricultural implements and clothing for the inhabitants; (3) a lithographing

¹ *Am. Annals of Education*, Vol. I (1830), based on a letter from Fellenberg to Woodbridge, August 24, 1829.

establishment where music and other things were printed; (4) a literary institution for the education of the wealthy and higher classes; (5) an intermediate or practical institution training for handicrafts and middle-class occupations; (6) an agricultural institution for the education of the poor to be farm laborers and for the training of rural school teachers.

The agricultural institution most significant for elementary education.—It was this sixth phase of the work that was generally copied in Switzerland and other European countries. Just as Pestalozzi had intended, agriculture was to be used as a means of moral and practical education for the poor. It also made their labors defray the expense of their education. In addition to training in agriculture, the institution provided training for cart-makers, carpenters, joiners, blacksmiths, locksmiths, shoemakers, tailors, etc. Fellenberg's practice of giving intending rural school teachers a thorough training in scientific agriculture was copied in many of the normal schools of Switzerland. The practice of training poor children in agriculture and other occupations under the conditions of family life was soon copied in most countries except the United States.

General adoption of Fellenberg's plan. Farm schools established in all cantons of Switzerland.—Henry Barnard wrote in his *National Education in Europe* (1854, p. 488):

In each of the cantons of Switzerland, in 1852, there was at least one rural or farm school conducted on the basis of a well regulated family. The school is open both to girls and boys. . . . The number of inmates averages from twenty to forty, and when the entire family exceed twenty, it is subdivided into lesser ones of twelve or more, who are placed under an assistant "father." The school instruction occupies three hours in summer and four in winter; the remainder of the day being devoted to work in the field or garden, or at certain seasons of the year and for a class of pupils, in some indoor trade or craft.

Redemption industrial plan imitated in other European countries.—The above-described scheme was imitated in many parts of Europe. In Germany, one of the most interesting examples was Redemption Institute or "Rauhe Haus," established in 1833, near Hamburg. This was a private charity admitting boys and girls of the worst type. Ordinarily such children would have been

identified with the criminal class and would have developed as criminals.

At the beginning of 1844, of 81 children who had left the establishment, 33 were apprenticed to artisans or mechanics, 7 entered at service as farm-laborers or domestics, 7 had become day laborers, 11 (girls) had become servants, 9 had become sailors, 3 entered the army, 1 prepared himself for the university, 5 continued at school; the occupation of 3 is unknown, and 2 children belonging to a family of vagrants could not be kept at any regular occupation.

Only 6 or 7 of these had misbehaved after leaving the school.

In England the famous Battersea Training Establishment for teachers was founded in 1839 in definite imitation of the Swiss normal schools. A noted reform school and farm for juvenile criminals was established at Red Hill in 1849 by the Philanthropic Society. On a farm of 140 acres, without bars or walls or gates, criminal children, including some of the most vicious, were trained and reformed according to the Pestalozzian-Fellenberg plan.

Fellenberg manual-labor scheme popularized in the United States by Woodbridge (1830).—One of the chief factors in popularizing the Fellenberg idea in the United States were the letters of William C. Woodbridge describing the Hofwyl institution, which started in the *American Journal of Education*, and ran for almost two years (1831-32) in the early volumes of its successor, the *American Annals of Education*. Henry Barnard said that of more than one hundred reports concerning Fellenberg's establishment "the most particular account and that in which the spirit of the institutions was considered by their founder to be best exhibited" was the one by Mr. Woodbridge.

American manual-labor schools mostly for higher education.—In the United States, the original Pestalozzian element (moral redemption through manual labor) in the Fellenberg scheme was not copied until much later than in most European countries. On the other hand, Fellenberg's idea was carried out in manual-labor institutions, organized to provide secondary or higher education along literary lines. These were very common during the second quarter of the nineteenth century. The two ideas most prominent in this development were: (1) the necessity of physical exercise;

and (2) the possibility of self-support for poor students. Theological seminaries, colleges, and many less important schools were established upon these principles from Maine to Tennessee. The movement began actively about 1825 and continued for about a quarter of a century. In general, it did not realize the hopes of its advocates, although some phases of it persist today in the farm work for self-support that students carry on in some of the agricultural colleges. Another phase of the development in the United States which is more directly related to elementary education remains to be discussed.

Industrial work in American reformatories. Early reformatories organized on prison principles.—We noted in an earlier paragraph that industrial training in reform schools on the family plan was copied from Switzerland in several European countries but was adopted very tardily in the United States.

In 1824 the House of Refuge for delinquent boys was established in New York City and similar institutions were organized in Philadelphia in 1826 and in Boston in 1827. Only a few others were established before 1850, but between 1850 and 1860 over a dozen were established. These institutions were the results of the movement which had started in England in the latter part of the eighteenth century, to provide separate institutions for juvenile delinquents instead of confining them with adult criminals, as was the general practice. These new institutions differed from those established on the Pestalozzian plan in two fundamental respects: (1) they were not homes, but were simply separate prisons for children; (2) although they provided industrial work it was not "educative labor," but prison-contract labor. The principal factor in this labor was the amount of money that the institution could make from it.

American reformatories little affected by Pestalozzian principles before 1873.—In 1873, Miss Mary Carpenter, one of the leaders in juvenile reform work in England, visited America and criticized the prison-like character of the reform schools. This criticism was one of the influences which was operative in stimulating the movement to reorganize these institutions on the Pestalozzian basis. I have found no general account of this development but

the following items are fair examples of it. They are taken from the report of the United States Commissioner of Education for 1882-83:

Pestalozzian basis of organization common in the eighties. Cottage plan.

The reform school of the present is a decided improvement on those which were first established sixty years ago. The changes effected have been stated as follows in a pamphlet issued by the Colorado State Industrial School:

"In the earlier history of these schools, all inmates were classed together. For their safe-keeping it was thought necessary to fasten them in cells at night; strong iron bars guarded the windows, etc. . . . In the modern reformatory neither high walls, cells, bolts or bars are found. Nothing in the surroundings distinguishes them from first-class public schools."

The Ohio Industrial School for Boys, opened at Lancaster, Ohio, in 1856, was the pioneer American institution on the cottage plan. These cottages were described in 1882 as follows:

The family buildings are arranged in a segment of a circle around the main building with the exception of a double building, called the Ohio, for the use of the very youngest boys, which is separated from the main and other buildings nearly half a mile, but is connected with the rest of the institution by a good board walk. These family buildings are named after the rivers in the state.

The building for the youngest children accommodated 100 boys, those for the older children accommodated 50. The large building for younger children contained schoolrooms for the "elder brother and his family," sitting-rooms for boys in the evening, sleeping-rooms for teachers and pupils, a playroom, workshop, etc. Here "home life more attractive than they had ever known awaited most of the inmates."

Pestalozzian educative labor replaces prison contract labor.—These quotations indicate the change from the spirit of prison life to the Pestalozzian spirit of home life. A similar change has taken place in the industrial work. On the old plan, this consisted of contract sewing and tailoring, cigar-making, brush-making, glove-making, knitting, shirt-making, the cane-seating of chairs, etc. These were factory industries of little educative or economic value for the individual child. For these have been substituted the domestic industries of the institutions, and other activities con-

nected with the maintenance of the plant, such as farming, gardening, care of stock, carpentering, blacksmithing, plumbing, painting, brickmaking, furniture making, etc. In addition to these, other special trades, such as printing and telegraphy, have been added.

General educational significance of Pestalozzian industrial education.—The special significance of this movement has been sufficiently indicated in the previous discussion. Its general significance appears when it is compared with the “manual training” movement, and with the recent tendencies to introduce direct industrial training into the public schools. The Pestalozzian movement, as successfully organized in practice, antedated the manual training movement by over half a century. It differed from the latter in aiming, to a considerable degree, directly at special efficiency in some trade or occupation. The manual training movement emphasized, on the other hand, general or formal values as opposed to specialized efficiency, “making the hand the obedient servant of the brain, training the eye for good form and shape, and teaching neatness and correctness in the execution of their work.” The Pestalozzian system has proven effective in special institutions, but has not had a chance in the American public schools. Manual training has had some opportunity to be tested out in the public schools, and many educators affirm that the results have not been satisfactory from the standpoint of industrial education. The recent movement for industrial education in the United States has tended to emphasize the necessity of training in specific industrial processes, which was the prominent element in the Pestalozzian system. The present tendency seems to be to experiment in the public schools with the modified Pestalozzian system as it is found in some juvenile reform schools.